

CLAIMS

1. Reinforced flexible hose, comprising:

at least one inner tubular layer (2) of plastic or rubber
5 which has an outside (ϕ_e) diameter and a longitudinal axis
(Y);

a chain knitted-type reinforcement layer (3), which has
rows (4) of substantially parallel stitches and lines (5)
10 of substantially parallel stitches, with respective stitch
counts per unit length (N_m , N_r) in a longitudinal
direction;

said knitted reinforcement layer (3) being provided in the
15 form of a single tubular layer and being formed on the
outer surface of said inner tubular layer (2) coaxially
thereto;

said rows (4) of stitches and said lines (5) of stitches
20 being substantially helical with respective longitudinal
itches (P_m , P_r) and inclinations (α , β) which are mutually
opposite with respect to the longitudinal axis (Y), so as
to eliminate the torque applied by the pressure of the
fluid inside it; and

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an outer layer (6) which is superimposed on said
reinforcement layer (3) to protect it;

characterized in that the longitudinal pitch (P_r) of said
30 lines (5) of stitches is substantially proportional to the

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square of the outside diameter (ϕ_o) of said inner layer (2).

2. Flexible hose according to claim 1, characterized in
5 that the number of lines of stitches per unit length (N_r) is substantially directly proportional to the outside diameter (ϕ_o) of said inner layer (2).

3. Flexible hose according to claim 1, characterized in
10 that the longitudinal pitch (P_m) of the rows of stitches is substantially constant and independent of the outside diameter (ϕ_o) of said inner layer (2).

4. Flexible hose according to claim 1, characterized in
15 that said rows (4) and said lines (5) of substantially helical stitches have different inclination angles (α , β) whose sum is substantially constant and equal to, or slightly lower than, 90° as the value of the outside diameter (ϕ_o) of said inner layer (2) varies.

20 5. Flexible hose according to claim 4, characterized in that the angle of inclination (β) of the lines (5) of stitches is substantially proportional to the square root of the outside diameter (ϕ_o) of said inner layer (2).

25 6. Flexible hose according to claim 1, characterized in that in said inner layer (2) the outside diameter (ϕ_o) is between 12 and 27 mm and the inside diameter (ϕ_i) is between 10 and 32 mm.

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7. Flexible hose according to claim 1, characterized in that the number of rows per unit length (N_m) is substantially constant as the outside diameter (ϕ_o) of said inner layer (2) varies, and is between 30 and 40 rows per 5 100 mm, with an average number of 35 rows per 100 mm.

8. Flexible hose according to claim 1, characterized in that the number of lines per unit length (N_r) is substantially proportional to the outside diameter (ϕ_o) of 10 said inner layer (2) and is between 10 and 16 lines per 100 mm.